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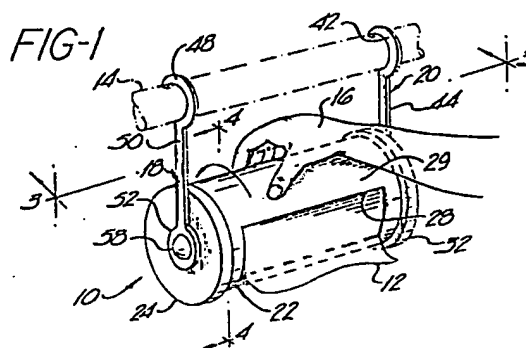
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54 Dispensing container.

57 A container (10) for dispensing contents is provided which may be opened, accessed, or closed by a user employing only one hand. The container comprises inner (30) and outer (22) hollow elements each having access openings (28, 36) therein which are registered by rotating one of said elements while maintaining the other element irrotatably affixed to a support member (14).



Dispensing ContainerBackground of the Invention

5 This invention relates to providing a container which
meets the criteria of being easily opened and closed by a
user's employment of only one hand. The invention is
particularly applicable for use as a container for mois-
tened tissues wherein such container can be hung or other-
10 wise affixed to a surface and such tissues can be readily
removed, one or more at a time, from the container.

In such applications, it is evident that, for the tissues
to retain their moisture content, it is essential that the
15 container be relatively securely closed prior to use,
opened at the time of use and then reclosed in a secure
manner after use.

To a degree therefore, the need for a secure closing of
20 the moistened tissue container is at odds with the desir-
able feature of ready access to the contents and in many
prior art suggestions one or the other of these aspects
has been sacrificed. For example, in U.S. Patent
3,995,582, issued to Livingston C. Douglas on December 7,
25 1976 a container for rolled moistened tissue has been
proposed which is provided with an open slot through which
the tissue is drawn. Such a device allows for the
evaporation of the moistening liquid from the container
and hence does not provide for a secured closure.

30 On the other hand, in U.S. Patent 4,131,218 issued to
Raymond W. Cox on January 1, 1978, an excellent container
for dispensing moistened tissues is suggested which
comprises a base and a cap, each having an access opening
35 therein. By rotating the base relative to the cap, the
access opening in each of these elements may be brought

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into and out of registration thereby providing easy access and secure closure, respectively. While this container is highly effective and suitable for many purposes, it still requires two hands to rotate the base with respect to the cap. This aspect is inconvenient when the container is to be used for an anal wipe or for a baby wipe where it would be most convenient for a busy mother to open, access and close the container with a single hand.

10 Summary of the Invention

In accordance with the teachings of this invention, a container for dispensing contents is provided which may be opened, accessed, and closed by a user's employment of only one hand. The container, in its broadest embodiment, comprises inner and outer hollow elements, each of which have a closed end, an open end, and axially extending walls therebetween. The walls of each of the elements are provided with an access opening therein for accessing the contents of the container.

The elements are nested together to have a common axis, with the inner element lying, at least partially within the outer element and with the open end of each of the elements confronting the closed end of the other element. The walls of the outer element overlie the walls of the inner element.

One of the elements is irrotatably affixed to a support member and the other of said elements is free to be rotated with a single hand of the user. This rotatable element is capable of being rotated about the axis common to the two elements so that the access opening in each of the walls of the elements can be positioned into and out of registration by merely rotating the rotatable element with one hand.

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The irrotatable affixation of one of the elements may be accomplished in various ways such as by securing the closed end of this element to a relatively immovable object such as a wall or to a large piece of furniture such as a baby's changing table. One preferable means of affixation is by use of a hanger irrotatably secured to the closed end of the irrotatable element.

Brief Description of the Drawings

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Fig. 1 is a perspective view of an embodiment of the container of this invention, shown in the open position;

Fig. 1a is a perspective view of the container of Fig. 1 shown in the closed position;

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Fig. 2 is an exploded perspective view of the container of Fig. 1;

Fig. 3 is a cross-sectional, longitudinal view of the container of Fig. 1, taken through line 3-3 of Figure 1;

20

Fig. 4 is a cross-sectional, transverse view of the open container of Fig. 1, taken through line 4-4 of Figure 1;

25

Fig. 4a is a cross-sectional, transverse view of the closed container of Fig. 1a, taken through line 4a-4a of Figure 2.

Detailed Description of the Invention

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Referring now to Figs. 1-4a, illustrated therein is a container 10, an embodiment of this invention specifically designed for dispensing moistened tissues 12. Container 10 is provided with hangers 18 and 20 and so is adapted to be hung onto rod 14 which may be the rod for supporting toilet tissue in a bathroom or may be a supporting rod

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affixed to a baby's changing table. As shown in Fig. 1, container 10 is in the open position, said container being placed in such position by the use of a single hand 16. A moistened tissue 12 is shown partially withdrawn from container 10. Fig. 1a shows the container in the closed position.

As best viewed in Fig. 2, container 10 comprises a hollow outer element 22 having a closed end 24 and an open end 26. Outer element 22 is provided with an access opening 28 in its axially extending wall 29. The container 10 further comprises a hollow inner element 30 having a closed end 32 and an open end 34 and is also provided with an access opening 36 in its axially extending wall 38.

In the assembled condition, container 10 comprises of inner element 30 being nested into outer element 22 so as to have a common axis 40, with the open end of each of the elements confronting the closed end of the other element and with the walls 29 of the outer element 22 overlying the walls 38 of the inner element 30.

In accordance with the teachings of this invention, one of the elements and, in the embodiment shown in the drawings, the inner element 30, is irrotatably affixed to a support member. As illustrated, such a support member is hanger 20 which comprises means for securing the hanger to a rod support, such means being hook 42; a shaft portion 44 to allow the container to be suspended below the rod; and a face plate portion 46 for securing hanger 20 to container 10. The securement of the inner element 30 at its closed end 32 to the support member, hanger 20 at face plate 46, may be accomplished by various means provided, of course, that such securement precludes the support member and the inner element from rotating with respect to each other about the inner axis 40. For example such securement may

be accomplished by molding at least the face plate 46 of hanger 20 as an integral part of inner element 30; by gluing or heat sealing the face plate 46 to the closed end 32 of inner element 30 or by any other means which will readily occur to one skilled in the art in view of the teaching herein.

In accordance with the teachings herein, the other element, (and in the illustrated embodiment, the outer element 22) must be free to rotate about the common axis. As shown in the drawings, the outer element 22 is also supported by a support member, hanger 18 which similarly comprises a hook portion 48, a shaft portion 50 and a face plate 52. In this instance, however, face plate 52 is rotatably secured to the closed end 24 of outer element 22. As is best illustrated in Fig. 3, for the specific embodiment shown therein, this rotatable securement is accomplished by providing face plate 52 with a bore 54 through which a pin 56, integral with the closed end 24 of element 22, protrudes. Accordingly, hanger 18 is free to rotate about pin 56 and, consequentially, outer element 22 is free to rotate about inner element 30 when the container is supported by hangers 18 and 20 on rod 14. Preferably, pin 56 is provided with an enlarged head 58 to preclude hanger 18 from slipping off the pin. Provided the materials of construction are chosen to be sufficiently flexible, the hanger may simply be snap fitted over the enlarged head 58 and onto pin 56 when the container is assembled.

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From the foregoing it can be seen that when the assembled container 10 is suspended from rod 14 by hangers 20 and 18, the outer element 22 may be rotated about the common axis 40 while the inner element 30 is held irrotatable by virtue of its irrotatable securement to hanger 20 which in turn is secured to rod 14. This rotation of outer element

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22 may be accomplished with one hand gripping any portion of the wall 29 or end 24 of outer element 22. It is contemplated that sufficient frictional forces are exerted between rod 14 and hook portions 42 and 48 to preclude
5 hangers 18 and 20 from detaching from rod 14 during such rotation. Such frictional forces can easily be increased by the user's applying a downward force concurrent with rotating the outer element.

10 The access openings 28 and 36 in walls 29 and 38 of outer elements 22 and inner element 30, respectively, are arranged so that they may, by rotation of outer element 22, be brought into and out of registration i.e., into the open and closed position, as is illustrated in Figs. 1 and
15 1a. The access openings should be sized and shaped so as to facilitate removal of the contents of the container. Preferably the shape of the outer element access opening 28 is in the shape of a window i.e., its periphery is defined entirely by wall 29 whereas access opening 36 in
20 the inner element is preferably a slot open at the open end 34 of inner element 30. This slot configuration facilitates the filling of the container whereas the combination of window and slot provides a good seal when the container is closed.

25 Alternatively, the inner element may be provided with a window as the access opening. By further providing a cover or cap for the open end of the inner element and by providing a foil or paper cover removably overlying the
30 window of the inner element, the inner element is then usable as a completely enclosed refill container for holding contents such as moistened tissues.

To help the user in registering the access opening into
35 either the open or closed position, it is preferable that rotation of the outer element be limited such that at one

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extreme rotational limitation, the openings are registered in the open position and in the other extreme rotational limitation, the openings are registered in the closed position. A simple means for accomplishing this is illustrated in Figs. 4 and 4a wherein a stop 60 is provided at the closed end of the outer element 22. As the outer element 22 is rotated into its open position (clockwise in Fig. 4) the stop is positioned to butt against the edge 62 of access opening 36 in inner element 30 when the openings are in registration in the open position. Similarly, as the outer element 22 is rotated into its closed position (counterclockwise in Fig. 4a), the stop will abutt against the edge 64 of access opening 36 in inner element 30, when the openings are in registration in the closed position.

The embodiment shown in the drawings is provided with means for maintaining the two elements in their intended nested position. Accordingly, the outer surface of wall 38 of inner element 30 is provided with a series of bevelled projections 66, radially spaced near the closed end 32. These projections 66 are adapted to snap into and ride within a peripheral groove 68 provided in the inner surface of wall 29 of outer element 22 near open end 26 thereof. The combination of projections and groove allows the two elements to be securely held together in use but, by virtue of the bevel in the projection, also allows the elements to be pulled apart and reassembled as required for refilling, if desired.

While the invention has been described in connection with the specific embodiment shown in the drawings it will now be apparent that many variations are possible by applying the broad principles disclosed herein. For example, while hangers have been disclosed as the supporting member to which one of the elements is irrotatably affixed, such hangers are not essential to the broad teachings herein

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and instead such element may be irrotatably secured to alternative supporting member e.g., a wall on the surface or a piece of furniture or bathroom fixture.

5 Further, while the outer element has been illustrated as being rotatable, with the inner element being irrotatably secured to the supporting member, it should be understood that such arrangement can be reversed. It is, however, preferable that it be the outer element which is rotatable
10 in which event the entire outer wall is available for gripping when rotating such outer element.

Further still, while the drawings illustrate both elements as being right cylinders, again it will be understood that
15 variations are possible e.g., frusto-conical sections or the like.

Finally, while it is contemplated that the materials of construction for the container of this invention is
20 moldable polymers, other materials such as cardboard, metal, wood or combinations thereof, are all usable.

CLAIMS

1. A container for dispensing contents which may be
opened, accessed, and closed by a user employing only one
5 hand comprising:

inner and outer hollow elements, each having a closed
end, an open end and axially extending walls therebe-
tween, each of said walls having an access opening
10 therein;

said elements being nested to have a common axis, with
said inner element lying at least partially within
said outer element, with the open end of each of said
15 elements confronting the closed end of the other
element, and with the walls of the outer element
overlying the walls of the inner element;

one of said elements being irrotatably affixed to a
20 support member and the other of said elements being
rotatable by a user's hand;

said other element being rotatable about said common
axis so that the access opening of each element can be
25 position into and out of registration by merely
rotating said other element with said one hand.

2. The container of claim 1 wherein said rotatable
element is the inner element.

30 3. The container of claim 1 wherein said rotatable
element is the outer element.

4. The container of any one of claims 1 to 3 wherein said support
35 is a first hanger, said first hanger having a portion
irrotatably affixed to said irrotatable element and a
portion for affixation to a further support.

5. The container of claim 4 having a second hanger, said second hanger having a portion rotatably affixed to said rotatable element and a portion for affixation to said further support.

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6. The container of claim 4 or claim 5 wherein said portion of said first hanger irrotatably affixed to said irrotatable element comprises a face plate irrotatably affixed to the closed end of said irrotatable element.

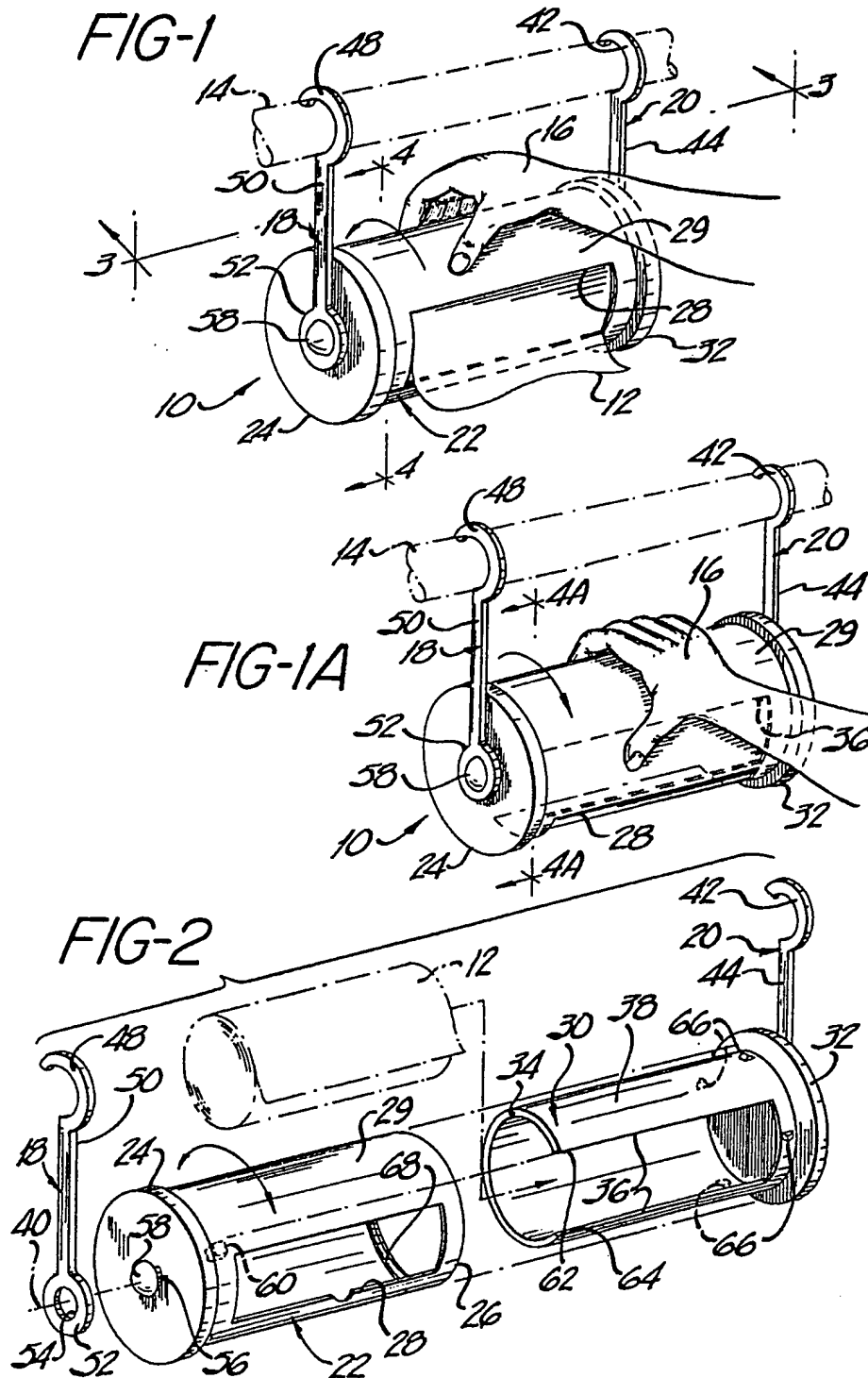
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7. The container of claim 5 or claim 6 when dependent on claim 5 wherein said portion of said second hanger, rotatably affixed to said rotatable element comprises a face plate rotatably affixed to the closed end of said rotatable element.

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8. The container of claim 7 wherein said closed end of said rotatable element is provided with a pin adapted to be received within a bore in the face plate of said second hanger whereby said second hanger is rotatable about said pin.

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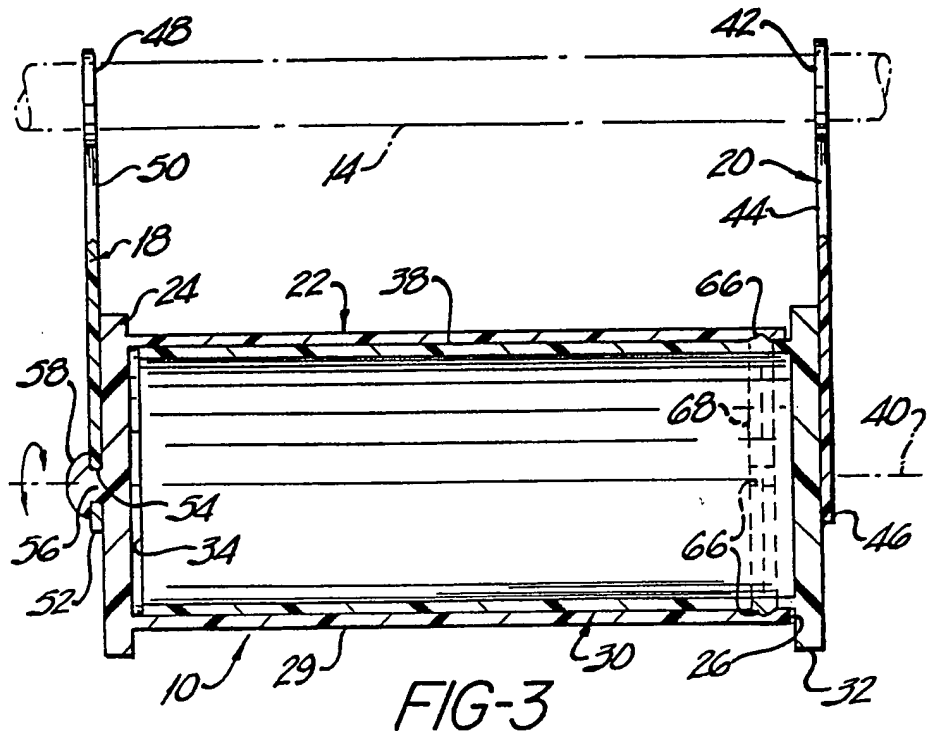


FIG-4

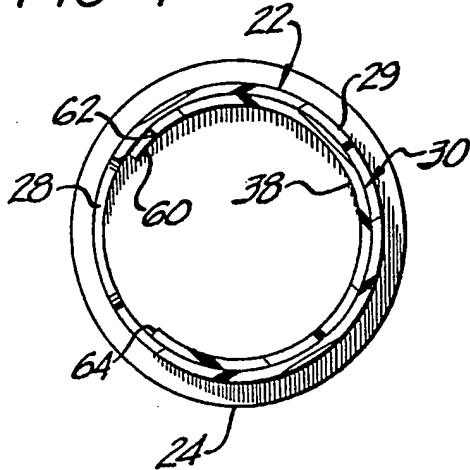
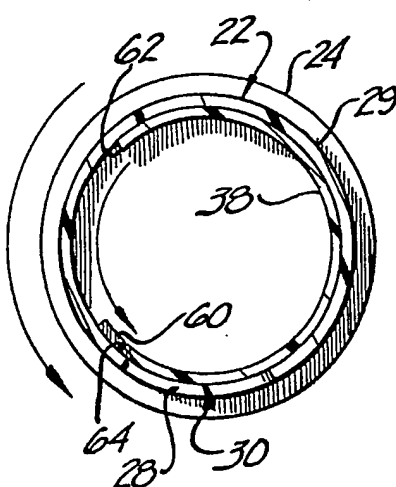


FIG-4A





European Patent
Office

EUROPEAN SEARCH REPORT

0122809

Application number

EP 84 30 2603

DOCUMENTS CONSIDERED TO BE RELEVANT			
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (Int. Cl. ³)
A	GB-A- 777 303 (WASMER) * Page 1, lines 59-84; figures 1-3 *	1,2	A 47 K 10/38
A,D	--- US-A-4 181 218 (COX) * Whole document *	1-3	
A	--- DE-C- 462 169 (MÜLLE) * Lines 31-45; figures 1,2 *	1	

			TECHNICAL FIELDS SEARCHED (Int. Cl. ³)
			A 47 K
The present search report has been drawn up for all claims			
Place of search THE HAGUE		Date of completion of the search 19-07-1984	Examiner CLASING M.F.
CATEGORY OF CITED DOCUMENTS			
X : particularly relevant if taken alone Y : particularly relevant if combined with another document of the same category A : technological background O : non-written disclosure P : intermediate document		T : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date D : document cited in the application L : document cited for other reasons & : member of the same patent family, corresponding document	